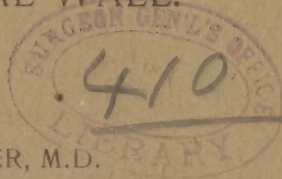


Currier (A. F.)

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A NEW OPERATION FOR PROLAPSUS OF THE
ANTERIOR VAGINAL WALL.

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BY ANDREW F. CURRIER, M.D.
NEW YORK.



*Read before the Section of Obstetrics and Diseases of Women at the meeting of
the American Medical Association at Nashville, Tenn., May, 1890.*

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WITH the exception of vesico-vaginal fistula, the lesions of the anterior vaginal wall are too often ignored by the majority of the profession, or if not ignored are deemed of too little importance for serious consideration. Especially is this the case with the lesion *prolapsus*, which may exist alone or in connection with descent of the bladder, uterus, posterior vaginal wall or rectum. It is well to insist upon the point that prolapse of the vagina does not signify the necessary co-existence of prolapse of the bladder or rectum, or both, for errors in diagnosis are frequently made by such confusion, which simply means that the examination has been made without sufficient care. In either case, it is true, the vaginal lesion calls for attention, but the symptoms are much more urgent in character when the organs contiguous to the vagina are involved, and the functions interfered with. It sometimes happens that the progress of this interference is so gradual that the patient herself does not attribute it to its true cause. The importance of the anterior vaginal wall as a support is sufficiently evident without any extended argument upon the mechanics of the subject. It is one of the means by which the weight of the bladder is

sustained, and of such portions of the intestines as may be super-imposed, and it is the medium through which the resultant of the forces exerted by the contraction of the abdominal muscles passes. The latter fact can be demonstrated in any case of prolapse by depressing the perinæum with the fingers and requiring the patient to bear down, *i. e.*, contract the abdominal muscles upon the unsupported anterior vaginal wall, which bulges forward to a degree corresponding to the force exerted and the resisting power of the tissues. The structures of the pelvic floor may be so disorganized as to be of little value as a means of support, but if the integrity of the anterior wall is preserved it may act as an efficient barrier and support for a long time. This fact of the importance of the anterior wall may serve as an argument for operations to repair its lesions if argument were necessary. The causes which lead to prolapsus of the anterior vaginal wall are not limited to the parturient process either directly or indirectly. It may occur in the young and nulliparous in connection with general relaxation of the muscular fibre; it may be the consequence of straining at stool in connection with persistent constipation, or it may occur in the aged in



connection with general atrophy of the muscular tissue.

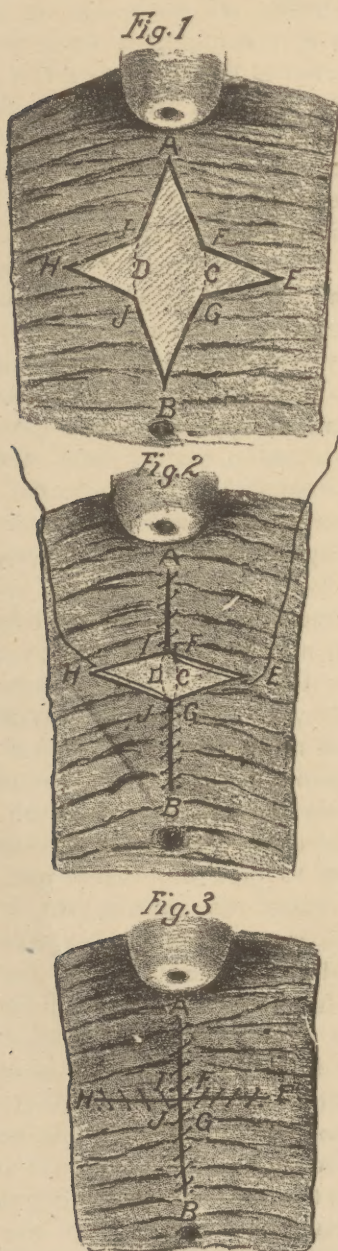
Without doubt it is most frequently related to parturition and the puerperium. A prolonged second stage of labor, with subsequent imperfect involution, may be its efficient cause, or it may occur in women who have had a number of pregnancies in rapid succession and in whom the conditions of life and health have been such as to preclude complete involution. It has at least two distinct forms or types. In one of these there is decided atrophy of the muscular fibre, with diminution in the thickness of the entire structure. There is also more or less hernia of the bladder and disturbance in the functions of this viscus, especially if there is co-existing cough or chronic constipation. In the other type the vaginal wall is thickened, the mucous membrane being hypertrophied and the connective tissue greatly increased. The degree of prolapsus in this form may be extensive, though the functions of the bladder may not be interfered with to any appreciable extent. The course of operative procedure for each type is essentially the same, but the danger of injuring the bladder during an operation is far greater in the first than in the second. The object of any operation for this condition is to restore the structure to its normal condition as a support and a barrier. This implies that the wall must be shortened, that is, contracted in the long axis of the vagina, but equally that it must be contracted in its short or transverse axis. The old operation of Dieffenbach may be taken as the type of those which have heretofore been performed. It consisted in the removal of an oval or el-

liptical segment of the mucous membrane, the size of which was to be governed by the degree of prolapse, and closing the wound with interrupted sutures so that a linear scar would result in the long axis of the vagina. Such a procedure manifestly diminishes the width of the prolapsed structure, but at the same time it lengthens it and exposes an unnecessarily large surface to the same conditions which previously caused the prolapse. Sims' operation is open to the same objection. So also is Emmet's, but to a lesser degree. Emmet also buries a quantity of undenuded tissue, which may or may not atrophy and may decompose. In any event, there must be, by such a procedure, undue tension upon a narrow line of union, and danger that this line will give way and leave the patient worse than she was before, a condition which is not hypothetical, as I myself have seen. The theory of the operation which I have devised is that it contracts the vaginal wall to a sufficient extent both in length and breadth, and distributes the tension over two lines of union at right angles to each other. It was made the subject of a communication before the Obstetric Section of the New York Academy of Medicine in January of this year, and on several occasions before the class at the New York Post-Graduate Medical School and Hospital. It was also demonstrated practically in three instances before the class of the last-named institution. The conditions in each of these three cases were different, and in all of them the results have been entirely satisfactory. The periods which have thus far elapsed since these operations were performed have been five, four and two months,

and these are, perhaps, too short to enable one to say anything with regard to permanency of result. Up to

sufficiently large ellipse of mucous membrane is removed through the long axis of the anterior wall, and then another through its short or transverse axis at right angles to the first.

The steps in the operation are as follows: The patient is placed in Sims' position, and the perinæum is retracted (I use in these operations the Erich-Hunter self-retaining speculum for retracting the perinæum). In this position the full extent of the prolapse is at once apparent. The mucous membrane is first seized with a tenaculum in the middle line of the anterior wall, just anterior to the vaginal portion of the cervix at A, and the tenaculum is handed to an assistant. With another tenaculum the mucous membrane is seized in the middle line under the urethra, nearer or more remote from the meatus, according to the extent of the prolapse at B, and this tenaculum is also handed to the same assistant. With a third tenaculum the mucous membrane is seized at a point midway between the other two points already taken, and half way between the middle line of the anterior wall and its lateral boundary, at C. The points A, C and B are then united by an incision with a scalpel, A C B. The point D opposite C is then seized with a tenaculum, the assistant still holding the tenacula at A and B, and the incision A D B is made with the scalpel. Then the mucous membrane at A is dissected sufficiently to enable one to grasp it with a mouse-tooth forceps held at right angles to the long axis of the vagina, and the flap or segment A C B D is dissected off or rolled upon the forceps. The point E, at the lateral border of the vagina, is then seized with the tenaculum,



the present time everything is perfectly favorable.

In performing the operation a suffi-

this point being in the same straight line with C, and then the middle point F of the line AC, and the middle point G of the line CB after which the segment FEG is removed in the same way as was the segment ACBD. In a similar manner the segment IHJ is removed, thus completing the denudation of the mucous membrane.

[NOTE. — The geometrical figure here displayed does not indicate either the absolute or relative portion of tissue removed, but only the principle involved. Of course, the area to be denuded will depend upon the size of the vagina and the degree of prolapse of the anterior wall. In the plate the diagram does not indicate as extensive a denudation as would almost always be necessary if the operation were indicated at all.]

Two long catgut sutures (No. 2 or No. 3, according to the thickness of the mucous membrane) are now threaded upon slightly curved needles of medium thickness and about an inch and a quarter in length. One of the sutures is passed through the wound from side to side near the apex A so as to bring the edges of the wound into accurate apposition, and tied. Then the suturing is continued without interruption until the junction of the two ellipses is reached at I and F. Next a similar continuous suture is passed, beginning at B, the opposite point from which the first suture was started. (See Fig. 1.) The approximation of the sides AI, AF, BJ and BG has of necessity tended to approximate also the sides EG, EF, HI and HJ as seen in Fig. 2. The suture which terminated at IF is now carried under the mucous membrane and brought out at E, but this prolonged portion plays no essen-

tial part in the operation and must be quite loose in the tissues. There would be no objection to securing and cutting off the suture at IF instead of prolonging it to E if one preferred to do so. From E a continuous suture is passed approximating the sides EF and EG, and in a similar manner with the continuation of the suture which was begun at B the sides HI and HJ are approximated. The eight sides of the original ground have now all been made to converge to a common centre (See Fig. 3), and form four lines of union, which being joined at the centre and the ends of the sutures tied give two lines of union cutting each other at right angles through or near the middle point and in which the tension is equably distributed. The vagina has been contracted, of course, by the area included by the original figure, which may be large or small, according to the requirements of each particular case. The sutures should be buried in the connective tissue if that is possible, but this is not practicable in cases in which there is much protrusion of the bladder, as it is not desirable to puncture that organ. In such cases the sutures should be passed merely from one edge of the wound to the other. There need be little fear that the sutures will cut out under ordinary circumstances, still I think it better to leave a margin of about one-eighth of an inch between the point of entrance of the needle and the edge of the wound. The tissue in the anterior wall is extremely vascular, and the nearer one approaches the bladder the freer will be the hæmorrhage. It is unnecessary to say that the wound should be thoroughly irrigated from time to time

during the operation, and I prefer to use for that purpose a solution of 1-5000 of sublimate. Little is required in the way of a dressing. The lines of suture may be painted with iodoform collodion if desired, but as the patient should be required to lie upon the back for a week after the operation the most favorable conditions for drainage obtain, and primary union will be the result except in rare cases. Within a week the wound will be healed and the catgut absorbed.

The histories of the three cases in which the operation has been performed are as follows:—

I. A very fat German, multipara, about 40 years of age. The uterus was very large and sub-involuted. There was extensive hypertrophy and prolapse of the anterior and posterior vaginal walls, but no prolapse of the bladder or rectum. In December, 1889, curettement of the uterus, trachelorrhaphy, and anterior and posterior colporrhaphy were performed at one sitting, all the wounds healing by first intention. The anterior wall was in a perfectly normal and satisfactory condition when the patient was seen May 15th, and the patient's general condition better than for several years.

II. A well-developed but feeble and anæmic German Jewess, 28 years of age. She has had six children at term and one miscarriage. Her last child was delivered by me in December, 1889, after a long and very severe labor, the left hand and arm presenting. A midwife and three physicians had made unsuccessful attempts at delivery before I was called in consultation. Podalic version was accomplished, with forceps to the after-coming head. The patient made a rapid

recovery, and was attending to her household duties again in two weeks. The uterus was very large and retroflexed, the anterior and posterior walls were greatly distended, and there was protrusion of the bladder.

January 24, 1890, curettement of the uterus, trachelorrhaphy and anterior and posterior colporrhaphy were performed. The wounds of the cervix and anterior wall healed *per primam*. A small abscess formed in the perinæum, and the uppermost suture in the posterior vaginal wall cut through the tissues. Notwithstanding these accidents the final result upon the posterior wall has been a very good one. The patient has been frequently seen, and on April 26th there was scarcely any trace upon the anterior vaginal wall of the operation wound. The result in this as in the previous case was completely satisfactory.

III. A feeble and emaciated Irish woman 36 years of age, who had had six children at term, and four miscarriages. The last miscarriage was in February, 1890, and she had been bleeding almost constantly when seen by me six weeks subsequently. She was also suffering with severe bronchitis, her cough being constant and harassing. The uterus was very large and flabby, there was prolapse of the vagina and bladder, and a cyst the size of a walnut in the posterior vaginal wall.

March 10, 1890, curettement of the uterus and trachelorrhaphy were performed, silver sutures being used. Several of the sutures cut deeply into the tissue.

March 26, anterior and posterior colporrhaphy were performed, and the vaginal cyst was removed. The

wound upon the anterior wall healed by first intention with the exception of about an inch of the transverse line. Upon the posterior wall most of the silver sutures cut through, the wound healing by granulation. This case taught me the important lesson that plastic operations upon the vagina or uterus of women suffering with bronchitis, or any other form of disease in which there is coughing and straining, should not be performed. The vagina and uterus move with every respiration, and the strong expulsive efforts which accompany every cough and every paroxysm of coughing will be almost sure to prevent healing of the wound and cause the

sutures to cut through the tissues. The case also taught that a yielding substance like catgut will stand such a strain far better than silk or silver or any other firm material. The risk of failure in such cases is usually great, and it is better to defer operative procedures until such a time as the tissues can remain at rest or approximately so while the healing process is going on. No. 3 patient was seen May 10th, and though still suffering with a very harassing cough the anterior wall has not yielded, and is quite as much contracted as at the time when the operation was finished.

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